NCI-Frederick Animal Care & Use
April 2006

Newsletter Contents

ACUC Member Spotlight

Robin Winkler-Pickett

Robin Winkler-Pickett is a Senior Research Associate in the Laboratory of Experimental Immunology. She received her BA degree from Hood College in 1984 and will soon complete her thesis requirements for an M.S. in Biomedical Sciences. Robin has been at the NCI-Frederick facility since 1983 when she began her career here as a student intern. Robin has spent the better part of 20+ years working in a basic immunology research laboratory focused on the study of NK cells and their role in innate immunity. More recently that work shifted to include looking at the interaction of NK cells and the acquired arm of immunity. As a result, Robin was responsible for establishing the first experimental autoimmune encephalomyelitis (EAE) mouse model here at the NCI-Frederick and she states working with the ACUC, veterinary staff and the facility staff served to enhance the scientific integrity of the research and assure the humane care of these compromised animals.

Robin's goals serving on the ACUC are multi-fold. First and foremost, she desires to help facilitate the research endeavors of the NCI-Frederick scientists working with animal models in the context of regulatory requirements. Second, she focuses on safety-related issues and identification of the use of Recombinant DNA in Animal Study Proposals to assure Federal regulatory compliance. Robin encourages all scientific staff to make use of the exceptional resources found on the ACUC website as a first stop when contemplating a new Animal Study Proposal or a modification.

Robin lives in the Frederick area with her husband and two sons. She has represented the NCI-Frederick community as a mentor for the student intern program and other educational scientific programs. She is an active community member serving as a citizen advisory committee member for the Frederick County Public Schools and as director of a weekend transfer center for children in divorced families.

Revised ACUC Guidelines

The ACUC has recently revised the following guidelines. Please ensure that you and your staff review these guidelines and incorporate as they apply to your research study.

- *EAE/Paralysis Clinical Assessment Guidelines (December 2005)*
- *Guidelines for Rodent Blood Collection (March 2006)*

These guidelines can be found at the following site: **http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/guidelines_nci.asp**

Revised Animal Study Proposal Form

Please be sure to download the current version (March 2006) of the **NCI-Frederick Animal Study Proposal Form** when submitting a new study for ACUC review. Additional hyperlinks and instructions have been inserted into the ASP form to assist with the completion process.

Animal Number Justifications

In accordance with **Federal Regulations**, all NCI-Frederick investigators are required to consider the replacement of animal models (in vitro, computer models, etc.) to accomplish the objectives of his/her proposed research study. When it is determined that reasonable **alternatives** cannot replace the use of in vivo models, the NCI-Frederick Animal Care and Use Committee (ACUC) is responsible for ensuring that investigators have adequately assessed their study requirements to ensure that the number of animals are appropriate to accomplish the proposed research objectives. Specifically, the investigator must ensure that he/she is using the minimum number of animals necessary (avoid over powering the study) while using an adequate number of animals (avoid under powering the study) to provide data that is relevant to fulfill

NCI-Frederick Animal Care and Use Links

Home Page
Guidelines and Recommendations
Alternatives
Training
Forms

The ACUC is always interested in new members to assist the committee. If you are willing to volunteer as an ACUC member or to participate in any of its subcommittees, please contact the **NCI-Frederick ACUC Office**

Regulations and Policies Links

Animal Welfare Act
Public Health Service Policy
Guide for the Care and Use of Laboratory Animals
U.S. Government Principles

NCI-Frederick Animal Care & Use
April 2006

his/her experimental objectives without unnecessary repetition of the study. The ACUC has developed a web page regarding **Animal Number Justifications** to assist investigators with the provision of this information for ACUC review.

Approved Source Vendors – Receiving and Quarantine Bypass

Effective March 1, the Laboratory Animal Sciences Program (LASP) implemented the bypass of R&Q for approved source animals for select animal facilities. The list of approved vendors includes the following:

- **Taconic**
- **Jackson Laboratories** (Production Only)
- **Charles River Laboratories** (Portage, Michigan, Kingston, New York, and Raleigh, North Carolina)

Facilities included in the bypass are 538, 539-CB, 550, 567 (limited access), 1022, 1023, 1036, 1037, 1048, and 1049. Those facilities that are considered to be **non-bypass** facilities are: 539CC, 539-2, 567 (barrier) and 571. Please contact LASP at 301-846-1542 if you have any questions regarding this new program.

Revised LASP SOP 3.021 – Rodent Weaning

The LASP recently revised (March 2006) *SOP 3.021 Rodent Weaning*. The SOP is designed to ensure that investigators take all necessary steps to prevent overcrowding in the NCI-Frederick animal facilities. **Please note that all investigators are required to comply with this SOP and this revision may impact how you utilize your cage space within the facility.**

The LASP recognizes that there may be circumstances that would require exemption to this SOP. Therefore, management has implemented the following process for requesting an exemption:

- All exemptions must be justified;
- Contact your facility manager and request an exemption in writing [preferably electronically];
- The LASP Director and/or Deputy Director will determine if exemption is justified and notify the applicable Facility Manager and Investigator of the decision;
- If approved, cage cards should bear a label indicating "SOP 3.021 Exemption"

In addition, LASP has provided some some colony management tips to assist investigators with SOP compliance:

- Reserve at least 20% of total cage allocation for appropriate separation and weaning; and
- Establish age limits [especially for breeding females] of eight months or sooner if dictated by performance. This does at least two things: 1) preserves space; and 2) ensures that breeding stock is fresh and at maximum fecundity.

Please contact your facility manager if you would like a copy of this SOP [a copy was disseminated previously by email to investigators] or if you have any questions. Thank you for your cooperation!

PCR-Based Testing Assays

It is well known that the contamination of biological specimens, such as cell lines, hybridomas, and tumor cells with rodent pathogens can have a devastating effect on in vivo and in vitro studies. To avoid exposure of our colonies to infectious agents that may be present in biological specimens that originated from outside the NCI-Frederick, the Mouse Antibody Production (MAP) test has been the method used for testing cell lines and materials of rodent origin for murine pathogens. The major disadvantage of MAP testing is the six to eight weeks required to get results. In addition, given the number of requests, submissions are backlogged thus compounding the long turn-around-time. To address this issue, the Laboratory Animal Sciences Program will shift to RADIL PCR-based testing assays (samples are evaluated on a case-by-case basis to determine eligibility) by the end of March. The University of Missouri Research Animal Diagnostic Laboratory (RADIL) has developed and validated a PCR-based alternative to MAP testing. The RADIL laboratory PCR testing panel is referred to as the **I**nfectious **M**icrobe **P**CR **A**mplifi**C**ation **T**est or **IMPACT** for the detection of murine pathogens. Comparison of IMPACT results with MAP testing results for representative DNA and RNA viruses indicated that the sensitivity of the IMPACT assay was equal or greater than that of MAP testing when homogeneous samples (e.g., tissue-culture derived cells) are assessed. Turnaround time for IMPACT results is five business days from the day the samples are received at RADIL. In addition, the cost of testing by PCR is markedly lower than traditional MAP testing. The submission of samples for testing will continue to be through the LASP Animal Health Diagnostic Laboratory (AHDL). The AHDL will submit samples on Wednesday to RADIL; samples received on Wednesday, Thursday, or Friday will be shipped the following week. For testing cultured cells by the IMPACT, two small cryovials of each sample with 1 x 10^7

NCI-Frederick Animal Care & Use
April 2006

cells/vial is needed. Cells may be in the form of a pellet or in growth media, freeze media or phosphate-buffered saline. For testing liquid samples (e.g., material extracted from cell culture) by the IMPACT, two small cryovials of each sample with 0.5 ml of sample/vial is required. It is anticipated that the majority of submissions will be done using the IMPACT assay since most submissions are tissue culture derived cell lines. However, traditional MAP testing will still be needed for certain specimens (i.e., primary cells, tissues, or tumors) as the use of PCR-based assays for these samples has greater limitations for several reasons. The decision to test by MAP or IMPACT will be made by AHDL. To provide AHDL with the information necessary to make informed decisions regarding which testing provides the greatest margin of safety, it is critical that submission forms be filled out completely and accurately to avoid delays and errors. If you have any questions or concerns, please do not hesitate to call Dr. Hendrick Bedigian, Director of the Laboratory Animal Sciences Program, at 301-846-1542.

Animal Study Proposals and IBC Requirements

The NCI-Frederick ACUC would like to remind investigators of the importance in ensuring that all necessary safety documentation (Recombinant DNA Registration Form and/or Pathogen Registration) is provided to the NCI-Frederick Institutional Biosafety Committee (IBC) in a timely manner to alleviate delays in the approval of your Animal Study Proposals (ASP). The ACUC is not permitted to release approval of your ASP until all related safety documentation has been provided, reviewed, and approved by the IBC. For additional information regarding these requirements, please visit **http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/guidelines/IBC_ACUC Documents.pdf**

ILAR: Phenotyping of Genetically Engineered Mice

The ILAR Journal has announced its new issue *Phenotyping Genetically Engineered Mice*. This issue brings together scholars from the field of murine transgenic technology, who share information regarding the pitfalls and problems associated with properly evaluating the end-results of genetic manipulations: The whole mouse. With proper design and interpretation, it should be possible to create genetically engineered mice that have minimal heterogeneity of (background) genetic constitution; are analyzed in a standardized, systematic fashion; and are phenotypically stable with successive generations. Investigators currently spend an enormous amount of time and resources focusing first on a particular gene and only later on the resulting genetically manipulated mouse. However, to focus on the manipulated gene without considering the rest of the bits that make a whole mouse is to risk creating the murine equivalent of a "white elephant."

Included in this issue more than 100 website references in categories such as rodent biology, physiology, embryology, genetics, husbandry, genotyping, phenotyping, behavior, pathology, necropsy, tissue processing, immunohistochemistry, and imaging. Also included are listservs, nomenclature, and other resources. For ordering information, please visit **http://dels.nas.edu/ilar_n/ilarjournal/journal.shtml**

Living Proof

NIH recently announced the new website **Living Proof** by listserv as a national public awareness campaign designed to build understanding of the process - and the promise - of biomedical research. Through compelling personal stories, **Living Proof** presents a vibrant history of the impact biomedical research has made. **Living Proof** was developed by States United for Biomedical Research (SUBR) and supported by the National Institutes of Health. Please visit the website (and share with others) at **http://www.living-proof.us/**

NCI-Frederick Animal Care and Use Links

Home Page
Guidelines and Recommendations
Alternatives
Training
Forms

The ACUC is always interested in new members to assist the committee. If you are willing to volunteer as an ACUC member or to participate in any of its subcommittees, please contact the **NCI-Frederick ACUC Office**

Regulations and Policies Links

Animal Welfare Act
Public Health Service Policy
Guide for the Care and Use of Laboratory Animals
U.S. Government Principles